



DENISE CAMPBELL

ERBIUM

Element Symbol: **Er**

Atomic Number: **68**

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With the atomic number of 68, Erbium appears as a white-silver metal in its purest form. Despite this Erbium appears as a sand ore in nature, putting it under the category of a Rare Earth Metal. Erbium was discovered in 1843 and then isolated into its pure form during 1934. Despite this, Erbium only became cheap enough to use commercially as recently as 1990. Since then Erbium has been used in a wide array of applications, more specifically the pink coloured Er^{3+} ions gain the most attention.

The unique colour of the Er^{3+} ions allow it to be used for glass and porcelain colouring. It is often used to colour cheap jewellery or lenses of glasses. Erbium also has many other, non-specific uses too. It's used in nuclear reactors, acting as control rods. It has an appearance in metal alloys, its specific properties help create ideal malleability and ductility. A large variety of Medical Applications, utilizing Erbium ion's unique wavelength makes laser surgery possible. It is even used to dope optical silica-glass fibres to help aid optical communications.

Commercially in Australia, Erbium lasers are used by dentists and skin rejuvenation specialists. The lasers are an adaption of the doped optical silica-glass fibres mentioned earlier. Optical applications not currently using Erbium doped optical fibres are transitioning to the more optimized version all the time.

Academically, Australia has provided some notable research into further investigating Erbium's properties. The University of Melbourne has made efforts to research more efficient Erbium doped optical communication techniques. The University of Victoria has also done research to test the properties of Erbium doped Optical fibres.

For Erbium's widely varied contribution to our lifestyle in the 21st century, Evolve Recruitment felt obliged to sponsor it over its many, more popular counterparts.

Provided by the element sponsor Evolve Scientific Recruitment

ARTISTS DESCRIPTION

The earth house symbolises the status of Erbium as a Rare Earth Metal, hence the soft green printing ink contrasting with the pinkish red colour of the text.

Linear patterns symbolise the various uses of Erbium – in nuclear reactors, and optical fibres.

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